Application No. 10/563,084   2   Docket No.: 64726(45710)
Amendment dated November 17, 2009
Reply to Office Action of June 25, 2009

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0103] to remove the underlining as follows:

[0103] In compliance with the conventions for MLSDs, branch metrics are logarithms of transition probabilities. The branch metrics may be obtained from a complete set of channel-state-conditioned amplitude histograms. An ~~amplitude histogram~~ amplitude histogram is a discrete amplitude probability mass distribution (or amplitude distribution, for short) conditioned on ~~channel states~~ channel states at a given sampling phase. Consequently, a channel-state-conditioned histogram is the amplitude distribution under the condition that the channel is in a given channel state and sampled at a fixed sampling phase. In addition, an amplitude histogram may be conditioned on sample values obtained at different sampling phases. As will be explained in connection with branch metrics below, an amplitude histogram obtained at the second sampling phase may be conditioned on the value obtained at the first sampling phase. The collection of such histograms for all possible channel states and all used over-sampling phases is called a ~~(probabilistic) channel model~~ (probabilistic) channel model. Sometimes it is necessary to distinguish the "~~complete~~ complete" and the "~~phase-specific~~ phase specific" ~~channel model~~ channel model. A phase-specific channel model is the subset of a complete (~~probabilistic~~ probabilistic) ~~channel model~~ channel model that is restricted to a given sampling phase. The complete channel model is the complete set of ~~phase-specific (probabilistic) channel models~~ phase-specific (probabilistic) channel models for all L samplers or sampling phases.